

CLAIMS

1. A mobile wireless data network to function in conjunction with a wireless network, the Internet and a multi-media handheld wireless device connected to said wireless network, said mobile wireless data network comprising:

a gateway server having a direct connection to a mobile switching center of said wireless network;

a local database, co-located with said gateway server, populated with frequently requested data formatted for presentation on said multi-media handheld wireless device, said local database connected to said gateway server;

an application for conducting an Internet search for data not held in said local database and reformatting data retrieved by said search for said multi-media handheld device, said application for conducting an Internet search connected to said gateway server; and

a mapping application to select the source of requested data based on the fastest response time, said mapping application connected to said gateway server.

2. The mobile wireless data network of Claim 1 further comprising:

a plurality of wireless networks utilizing a transmission protocol selected from the set of GSM, GPRS, CDMA, TDMA and CDPC;

a plurality of gateway servers, each gateway server connected to at least one wireless network using only one of said transmission protocols; and

00000000000000000000000000000000

each of said plurality of gateway servers being associated with at least one of said local database, said application for conducting an Internet search and said mapping application.

3. The mobile wireless data network of Claim 2 further comprising:

a central database tracker application accessible by each of said mapping applications to provide a data location access path and access time for each local database.

4. The mobile wireless data network of Claim 3 wherein a user of a first multi-media wireless handheld operating on a first wireless network using a first transmission protocol access data from a local database connected to a gateway server connected to a second wireless network utilizing a second transmission protocol.

5. An acceleration server associated with a gateway server and at least one multi-media handheld device to access data requested by said at least one multi-media device quickly, said acceleration server comprising:

a data tracking and document caching module to provide the location of said data having the fastest access and the path to access that data in the fastest manner;

a data compression module to format said data in a compact format using data compression techniques including tagging; and

G E N E R A T E D
B Y
C O M P U T E R

a data conversion module to convert said data from an existing format to a predetermined format interpretable by said multi-media handheld device.

6. The acceleration server of Claims 5 further comprising converting graphical data in GIF/JPEG format to PNG format.

7. The acceleration server of Claim 5 further comprising an analysis module to determine the data interpretation capabilities of the requesting multi-media handheld device and reformat said data in said compact format to remove formats not supported by said requesting multi-media handheld device.

8. A self-generating database stored in a cache of a proxy server comprising:

an analysis module to examine an input database for location identifiers and interest areas;

a location-based module utilizing said location identifier to initially populate said self-generating database; and

an interest-area module utilizing said interest areas to populate said self-generating database.

9. A security management system for ensuring efficient security checking across Internet connections comprising:

a security receiving module to receive security encoded communications from at least one handheld device;

a splitting module to separate security components of said communications from data components of said communications;

a security module to act on said security components independently of said data components including retrieving a public key from a server accessed by an Internet communication;

a data handling module to send or receive said data components of said communication independently of said security component; and

a synchronizing module to assure that a complete transaction based on said communication is not completed unless security provisions are satisfied.

10. A multi-media handheld device mapping application comprising:

variably detailed map sized and displayed on a handheld screen; and

at least one icon representing services desired displayed on said screen.

11. The multi-media handheld device mapping application of claim 10 further comprising:

access to a database of user-defined preferred services; and

at least one icon representing a personal preferred service displayed on said screen.

12. The multi-media handheld device mapping application of claim 10 further comprising:

access to user location information; and

RECEIVED
MAILED
RECORDED
SEARCHED
INDEXED
FILED
APR 22 1992
U.S. PATENT AND TRADEMARK OFFICE

location display module displaying a variably detailed map of the region surrounding said user location.

13. The multi-media handheld device mapping application of claim 12 further comprising:

at least one icon representing available video opportunities.

14. The multi-media handheld device mapping application of claim 13 wherein said video opportunities include location-specific video.

15. The multi-media handheld device mapping application of claim 12 further comprising:

at least one icon representing a commercial opportunity proximate to said user's location.

16. A system allowing a mobile user to be a full participant on the Internet comprising;

a connection to a mobile user via a multi-media wireless handheld device;

a proxy server to reformat data access requests to provide fast delivery despite a limited bandwidth on said connection;

a central database to provide data for specifying a route through the Internet; wherein said proxy server provides requested data from a database of preformatted information screens or reformats data accessed via the Internet for presentation on said multi-media wireless handheld device.